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EXAMINER

NGUYEN, PHUONGCHAU BA

ART UNIT

PAPER NUMBER

2616

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/991,462

Applicant(s)

WELLS ET AL.

Examiner

Phuongchau Ba Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 17-34 and 37-49 is/are rejected.
- 7) ☒ Claim(s) 15, 16, 35 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11-16-1</u> . | 6) <input type="checkbox"/> Other: _____  |

*Claim Objections*

1. Claims 4, 8, 10, 11, 13, 18, 20, 28, 29, 34, 37, 40, 44, 46-47 are objected to because of the following informalities: All abbreviations or initial symbols in the objected claims should be labeled with descriptive legends {i.e., in claim 29-CPLD should be labeled with its descriptive legends as Complex Programmable Logic Device (CPLP)}.

-Claim 39, line 3, "device s" should be changed to ---devices---

-Claims 30 and 47, ":" should be deleted. Note: following the column ":" should be a list of steps or means/devices.

Appropriate correction is required.

*Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 48 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject

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matter which applicant regards as the invention. Claim 48 is vague and indefinite because claimed limitation of claim 48 seems to contradict to the claimed limitation of claim 47, wherein claim 47 (independent claim) claimed the switching of data to the secondary network cable when a fault is detected from monitoring and claim 48 claimed "switching of data traveling along the primary network to the secondary network cable is accomplished without any active management of monitoring or switching apparatus". Please clarify the claimed limitation as recited in claim 48 in a way that would not contradict to claim 47. Claims 31, 41 also have the same problem as disclosed in claim 48.

Claim 26 is vague and indefinite because it is not clear what is meant by "automatic redundant network cable operation".

Claim 4, 28, 34, 37, 40 are vague and indefinite, because it is not clear what is meant by the first and second monitoring devices are phys. Please define the PHYS.

*Claim Rejections – 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors

Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology

Technical Amendments Act of 2002 do not apply when the reference is a U.S.

patent resulting directly or indirectly from an international application filed

before November 29, 2000. Therefore, the prior art date of the reference is

determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-

AIPA 35 U.S.C. 102(e)).

5. Claims 1, 12, 14, 19, 21, 24, 25, 27-29, 30-34, 37-42, 47-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawase (5,631,896).

Regarding claim 1,

Kawase (5,631,896) discloses an autonomous circuit enabling the routing of data to a primary or secondary network cable connected to primary and secondary nodes (not shown-but it is inherent on the working and protection paths) comprising:

a first monitoring device (bit error detecting circuit 56-fig.3) for reporting link status of the primary network cable (working path);

a logic device (correlation monitoring circuit 75-fig.3) for monitoring the link status reported by the first monitoring device (bit error detecting circuit 56-fig.3); and

a switching device (switching circuit 71-fig.3) for routing the data to one or the other of the primary or secondary network cables.

Regarding claim 12,

Kawase discloses in figure 3 wherein the only purpose of the first and second monitoring devices (bit error detecting circuits 56 & 66-fig.3) is monitoring the link status of the primary and secondary network cables (working and protection paths) and their associated ports (not shown), and reporting the status (to the correlation monitoring circuit 75-fig.3) using a link status output associated with each of the first and second monitoring devices (bit error detecting circuits 56 & 66-fig.3).

Regarding claim 14,

Kawase further discloses wherein the logic device (correlation monitoring circuit 75-fig.3) causes the switching device (switching circuit 71-fig.3) to change the route of the data from the primary cable to the secondary cable if the first monitoring device reports a fault in the primary network cable or primary port, and the second monitoring device reports no fault in the secondary network cable or the secondary port (by sending switching control signal S21-fig.3).

Regarding claim 19,

Kawase further discloses wherein the primary and secondary network cables comprise one of: a fiber distributed data interface (FDDI), a token ring network, or an asynchronous transfer mode (ATM) (col.1, lines 9-12).

Regarding claim 21,

Kawase further discloses wherein the primary and secondary network cables connect to nodes (line terminals 1 & 2-fig.1), and not to a server.

Regarding claim 24,

Kawase further discloses wherein the circuit (figs. 2-3) comprises hardware only.

Regarding claim 25,

Kawase further discloses wherein the circuit (figs. 2-3) comprises no user configurable parameters and no firmware.



Regarding claim 27,

Kawase further discloses wherein the circuit (figs.2-3) provides electrical outputs (S7 & S17) to indicate the primary and secondary network cable status (error or not) to other equipment (correlation monitoring circuit 75-fig.3).

Regarding claim 28,

Kawase further discloses wherein the monitoring device is PHY (signal failure detecting circuits 16 & 26-fig.2).

Regarding claim 29,

Kawase further discloses wherein the logic device (correlation monitoring circuit 75-fig.3) comprises a CPLD (program for how to determine whether the switching between the working path and the protection path should be carried out, col.7, lines 58-62).

Regarding claim 30,

Kawase discloses a method of creating a cable redundancy comprising:

monitoring a primary network cable (working path) with a first monitoring device (signal failure detecting circuit 16-fig.2) and switching data traveling along the primary network cable (working path) to a secondary network cable (protection path) when a fault is detected in the primary network cable (working path), wherein a link status output on the first monitoring device (i.e., failure on the working path) indicates the status of the primary network cable (figs. 9-11).

Regarding claim 31,

Kawase further discloses upon detected the failure condition by the signal failure detecting circuit 16, the switch circuit 30 switched the data from working data link to the protection data link. Note: either monitor or switch apparatus is active, in Kawase-the signal failure detecting circuit is active until switching, emphasis added (corresponding to “wherein the switching of data traveling along the primary network cable to the secondary network cable is accomplished without any active management of monitoring or switching apparatus”).

Regarding claim 32,

Kawase further discloses wherein the monitoring of (the primary network cable) and switching from the primary network cable are accomplished with no programming and no software (by the switching circuit 30-fig.2).

Regarding claim 33,

Kawase further discloses monitoring the secondary network cable (protection path) with a second monitoring device (signal failure detecting circuit 26-fig.2), wherein a second link status output on the second monitoring device indicates the status of the secondary network cable (i.e., failure on the protection path, see figs.9-11).

Regarding claim 34,

Kawase further discloses wherein the second monitoring device is PHY (signal failure detecting circuits 16 & 26-fig.2).

Regarding claim 37,

Kawase further discloses wherein the first monitoring device is PHY (signal failure detecting circuits 16 & 26-fig.2).

Regarding claim 38,

Kawase (5, 631,896) discloses a method of administering a redundant cable system comprising:

monitoring primary network cable (working path-fig.2) with first monitoring device (signal failure detecting circuit 16-fig.2);

monitoring secondary network cable (protection path-fig.2) with second monitoring device (signal failure detecting circuit 26-fig.2), and the second monitoring device indicates no faults in the secondary network cable (figs.9-11); and

switching a data stream route from the primary network cable to the secondary network cable when the first monitoring device indicates a fault in the primary network cable (by the switch circuit 30-fig.2, col.1, lines 54-62).

Regarding claim 39,

Kawase further discloses wherein the faults in the primary and secondary network cables (working and protection paths—fig.2) are indicated solely by link status outputs on each of the first and second monitoring devices (signal failure detecting circuits 16 & 26—fig.2).

Regarding claim 40,

Kawase further discloses wherein the first and second monitoring devices are PHYS (signal failure detecting circuits 16 & 26—fig.2).

Regarding claim 41,

Kawase further discloses upon detected the failure condition by the signal failure detecting circuit 16, the switch circuit 30 switched the data from working data link to the protection data link. Note: either monitor or switch apparatus is active, in Kawase—the signal failure detecting circuit is active until switching, emphasis added (corresponding to “wherein the switching of data traveling along the primary network cable to the secondary network cable is

accomplished without any active management of monitoring or switching apparatus”).

Regarding claim 42,

Kawase further discloses wherein the monitoring of (the primary network cable) and switching from the primary network cable are accomplished with no programming and no software (by the switching circuit 30-fig.2).

Regarding claim 47,

Kawase (5,631,896) discloses a method of creating a cable redundancy comprising:

monitoring a primary network cable with a first PHY (signal failure detecting circuit 16-fig.2) and switching (by switch circuit 30-fig.2) data traveling along the primary network cable to a secondary network cable when a fault is detected in the primary network cable, wherein a link status output (failure status of the working link) on the first PHY indicates the status of the primary network cable (col.2, lines 54-62, fig.2).

Regarding claim 48,

Kawase further discloses upon detected the failure condition by the signal failure detecting circuit 16, the switch circuit 30 switched the data from working data link to the protection data link. Note: either monitor or switch apparatus is active, in Kawase—the signal failure detecting circuit is active until switching, emphasis added (corresponding to “wherein the switching of data traveling along the primary network cable to the secondary network cable is accomplished without any active management of monitoring or switching apparatus”).

Regarding claim 49,

Kawase further discloses the monitoring the working data link is monitored by the signal failure detecting circuit 16, see fig.2 (corresponding to “wherein the monitoring of the primary network cable is accomplished with no programming and no firmware”).

6. Claim 44 is rejected under 35 U.S.C. 102(e) as being anticipated by Wang (6,813,241).

Regarding claim 44,

Wang (6,813,241) discloses a circuit (line selection device 260, figs. 5a-5b) enabling the routing of data to a primary (working data link) or secondary (protection data link) network cable connected to primary and secondary nodes (not shown) comprising:

a first PHY (monitor device 280-fig.5a) for monitoring link status of the primary network cable;

a complex programmable logic device (CPLD) (not shown) for monitoring the link status (i.e., failure in working data link) reported by the first PHY (based upon the working data link status, triggering event is activated to switch data from failed working data link to the protection data link-emphasis added, col.8, lines 35-38); and

a switch (switch 270-fig.5a) for routing the data to one or the other of the primary or secondary network cables.



*Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-7, 9-10, 17-18, 23, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase (5,631,896) in view of Bray (6,618,392).

Regarding claim 2,

Kawase discloses all the claimed limitations, except (1) the circuit (line selection device 260-fig.5a) comprises a repeater device for retransmitting data from a local network port, the repeater having at least two ports from which the repeater device can transmit outgoing data and at least one port, which can be used for receiving incoming data .

However, in the same field of endeavor, Bray (6,618,392) discloses a repeater for retransmitting received data to all ports, see column 1, lines 22-

26; fig.1 (corresponding to (1)). Therefore, it would have been obvious to apply Bray's teaching to Kawase's system with the motivation being to prevent the network from being rendered unusable by a node or path that is down.

Regarding claim 3,

Kawase further discloses a second monitoring device (error bit detecting circuit 66-fig.3) for reporting the link status of the secondary network cable (protection path) and secondary node.

Regarding claim 4,

Kawase further discloses wherein the second monitoring device is PHY (signal failure detecting circuits 16 & 26-fig.2).

Regarding claim 5,

Kawase further discloses wherein the logic device (correlation monitoring circuit 75-fig.3) monitors the link status reported by the second monitoring device (bit error detecting circuit 66-fig.3).

Regarding claim 6,

Kawase further discloses wherein the logic device (correlation monitoring circuit 75-fig.3) causes the switching device (switching circuit 71-fig.3) to change the route of the data from the primary cable to the secondary cable if the first monitoring device reports a fault in the primary network cable or primary port, and the second monitoring device reports no fault in the secondary network cable or the secondary port (by sending switching control signal S21-fig.3).

Regarding claim 7,

Kawase discloses all the claimed limitations, except (1) wherein the logic device (correlation monitoring circuit 75-fig.3) causes the switching device (switching circuit 71-fig.3) to change the route of the data from the secondary cable (protection path) to the primary cable (working path) if the second monitoring device reports a fault in the secondary network cable or the secondary port, and the first monitoring device reports no fault in the primary

network cable or the primary port. However, it would have been obvious to an artisan to implement a reversion to the working path upon a detection of error on the failure path with the motivation being to provide an efficient way to overcome the effect of failures within the network and provide fast restoration of transmission link once a failure has been detected.

Regarding claim 9,

Kawase discloses in figure 3 wherein the only purpose of the first and second monitoring devices (bit error detecting circuits 56 & 66–fig.3) is monitoring the link status of the primary and secondary network cables (working and protection paths) and their associated ports (not shown), and reporting the status (to the correlation monitoring circuit 75–fig.3) using a link status output associated with each of the first and second monitoring devices (bit error detecting circuits 56 & 66–fig.3).

Regarding claims 10, 13,

Kawase discloses all the claimed limitations, except (1) wherein neither the first nor second monitoring device is used as an interface between a physical cable medium and a network MAC device.

However, Kawase discloses the first and second bit error detecting circuits 56 & 66-fig.3 connecting to the working and protecting paths correlation monitoring circuit 75-fig.3, thus no bit error detecting circuits used as interface between the physical cable medium and network MAC device (corresponding to (1)). Therefore, it would have been obvious to an artisan to use bit error detecting circuits to detect errors on the working and protection paths with the motivation being to provide an efficient way to overcome the effect of failures within the network and provide fast restoration of transmission link once a failure has been detected.

Regarding claim 17,

Kawase discloses all the claimed limitations, except (1) wherein the primary and secondary network cables comprise an Ethernet network.

However, in the same field of endeavor, Bray (6,618,392) discloses the selected path in an Ethernet network under IEEE standard 802.3u at processing speed, 100 Mb/s (100 Base-TX over untwisted pairs, 100 Base-FX over fiber optic cabling), see col.1, lines 28-57 (corresponding to (1)). Therefore, it would have been obvious to apply Bray's teaching to Kawase's system with the motivation being to provide faster operation of 100 Base-T system at 125 Mb/s data rate.

Regarding claim 18,

Kawase discloses all the claimed limitations, except (1) wherein the Ethernet network is a 10/100 Base-TX Ethernet network.

However, in the same field of endeavor, Bray (6,618,392) discloses traditional Ethernet network (10Base-T) operate at 10 Mb/s Ethernet protocol, as described in standard IEEE 802.3 and the newer Ethernet network under IEEE standard 802.3u accomplished the faster operation of 100 Base-T system at 125Mb/s for unshielded twisted pair physical media, i.e., 100 Base-TX, see col.1, lines 28-57 (corresponding (1)). Therefore, it would have been obvious

to apply Bray's teaching to Kawase's system with the motivation being to provide faster operation of 100 Base-T system at 125 Mb/s data rate.

Regarding claim 22,

Kawase discloses all the claimed limitations, except (1) wherein the circuit is packaged in a housing of dimensions no greater than five inches high, by ten and one-half inches deep, by eighteen inches wide. However, it would have been obvious to an artisan to change in size to make portable, see *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claim 23,

Kawase discloses all the claimed limitations, except (1) wherein the circuit may service only a single Ethernet link.

However, in the same field of endeavor, Bray discloses Ethernet networks see fig.1, column 1, lines 22-57 (corresponding to (1)). Therefore, it would have been obvious to an artisan to apply Bray's teaching to Kawase's system with the motivation being to provide faster operation at a faster rate.

Regarding claim 26,

Kawase discloses all the claimed limitations, except (1) wherein the circuit is integrated within another Ethernet device to provide automatic redundant network cable operation, or operation with redundant network devices.

However, in the same field of endeavor, Bray discloses switch 24 comprising repeaters 10 Mb/s and 100 Mb/s, see fig.1 (corresponding to (1)). Therefore, it would have been obvious to an artisan to apply Bray's teaching to Kawase's system with the motivation being to prevent the network from being rendered unusable by a node or path that is down.

9. Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase in view of Takeguchi (6,735,171).

Regarding claims 8, 11,

Kawase discloses all the claimed limitations, except (1) wherein the first and second monitoring devices are replaced by one or more programmable logic devices or ASICS.



However, in the same field of endeavor, Takeguchi (6,735,171) discloses a firmware 22, 32, 202, 303 (figs.1, 3, 6, 8, 10, col.3, line 8-col.4, line 10)(corresponding to (1)). Therefore, it would have been obvious to an artisan to apply Takeguchi's teaching to Kawase's system with the motivation being to easy upgrade or modify instructions to how to monitor the path effectively.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase in view of Burke (6,233,235).

Regarding claim 20,

Kawase discloses all the claimed limitations, except (1) wherein the FDDI is a fiber optic 100 base-FX.

However, in the same field of endeavor, Burke (6,233,235) discloses a variety of networks of ATM, SONET, FDDI, as well as 100Base-T Ethernet networks, see column 6, lines 45-48 (corresponding to (1)). Therefore, it would have been obvious to an artisan to apply Burke's teaching to Kawase's system with the motivation being to provide faster operation of 100 Base-T system at 125 Mb/s data rate.

11. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase in view of Wang (6,813,241).

Regarding claim 43,

Kawase further discloses when the second monitoring device (signal failure detecting circuit 26-fig.2) indicates a fault in the secondary network cable (protection path), the first monitoring device (signal failure detecting circuit 16-fig.2) indicates no faults in the primary network cable (working path), see figs.9-11.

Kawase discloses all the claimed limitations, except (1) switching the data stream route from the secondary network cable to the primary network cable. However, in the same field of endeavor, Wang discloses when the working data link 220-fig.5a has recovered from a failure, reversing (switching back) to the working data link from the protection data link (col.8, lines 41-65). Therefore, it would have been obvious to an artisan to apply Wang's teaching to Kawase's system with the motivation being to provide an efficient way to overcome the

effect of failures within the network and provide fast restoration of transmission link once a failure has been detected.

12. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Bray (6,618,392).

Regarding claim 45,

Wang discloses all the claimed limitations, except (1) the circuit (line selection device 260—fig.5a) comprises a hub device for retransmitting data from a local network port, the hub having a primary and secondary port for both receiving incoming data and sending outgoing data.

However, in the same field of endeavor, Bray (6,618,392) discloses a repeater for retransmitting received data to all ports, see column 1, lines 22–26; fig.1 (corresponding to (1)). Therefore, it would have been obvious to apply Bray's teaching to Wang's system with the motivation being to prevent the network from being rendered unusable by a node that is down.

13. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Kawase (5,631,896).

Regarding claim 46,

Wang discloses all the claimed limitations, except (1) the circuit (line selection device) comprising a second PHY for monitoring the link status of the secondary network cable and secondary node.

However, in the same field of endeavor, Kawase (5,631,896) discloses signal failure detecting circuits (16 & 26-fig.2) for detecting (monitoring) a line signal failure on the protection path, see column 1, lines 54-65 and figs. 9-11. Therefore, it would have been obvious apply Kawase's teaching to Wang's system with the motivation being to avoid switching data to a failed protection data link.

*Allowable Subject Matter*

14. Claims 15-16, 35-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is 571-272-3148. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 2:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DUCHO  
PRIMARY EXAMINER

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Phuongchau Ba Nguyen

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